

ACHINTHA UMayANGA

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PROFESSIONAL SUMMARY

Associate Software Engineer with hands-on experience building full-stack applications, real-time systems, asynchronous processing services, and cross-platform mobile applications. Experienced with ASP.NET Core, React/React Native, Node.js, PostgreSQL, Redis, RabbitMQ, Centrifugo, Docker, and S3-compatible storage. Focused on writing production software, improving system performance and reliability, and understanding systems from application code through infrastructure.

TECHNICAL SKILLS

Languages: C#, JavaScript, TypeScript, Python, Java

Backend: ASP.NET Core, Entity Framework Core, Node.js, Express.js, FastAPI, Django, Spring Boot, REST APIs, Microservices

Automations: n8n

Frontend & Mobile: React, React Native, Expo, Redux Toolkit, Vite, Tailwind CSS, Reanimated

Databases & Caching: PostgreSQL, Microsoft SQL Server, MongoDB, Redis

Messaging & Real-Time: RabbitMQ, Apache Kafka, Centrifugo, SignalR, WebSockets

Infrastructure & Storage: Docker, AWS S3, Cloudflare R2, S3-compatible object storage

Media & AI: FFmpeg, ImageSharp, ONNX, RAG, LLMs, SLMs, Knowledge Graphs

WORK EXPERIENCE

Cloud Syntax (Pvt) Ltd | Associate Software Engineer | *May 2025 – Present*

- Developed full-stack features for an AI-powered enterprise CRM, contributing across React, ASP.NET Core, APIs, databases, workflow automation, and UI/UX modernization.
- Built a real-time notification infrastructure using ASP.NET, Centrifugo, Redis, and WebSockets, designed to offload persistent connection handling from application servers and support horizontal scaling.
- Implemented and tested real-time infrastructure at 10,000+ simulated concurrent connections, focusing on low-latency message delivery and connection reliability.
- Designed and developed an independent media-processing microservice using FFmpeg, ImageSharp, and ONNX models for image/video processing and automated content moderation.
- Implemented asynchronous media-processing workflows with RabbitMQ, including retry handling, dead-letter queues, and message idempotency to improve fault tolerance.
- Implemented direct client uploads using presigned URLs with S3-compatible object storage, reducing unnecessary media traffic through the application backend.
- Contributed to adapting the enterprise platform for a public-sector digital management system supporting large numbers of government users.

PROJECTS

OfficeCritic Mobile Application | *React Native, Expo, Reanimated*

- Contributed to migrating a high-traffic web ecosystem into a cross-platform mobile application using React Native and Expo.
- Implemented reusable mobile UI components and optimized animations with React Native Reanimated to reduce JavaScript-thread workload.
- Worked with local caching and real-time feed consumption to improve responsiveness and reduce unnecessary network and bridge overhead.

Media Processing Microservice | *ASP.NET, FFmpeg, RabbitMQ, ImageSharp, ONNX, Cloudflare R2*

- Developed an independent service for image and video processing, including compression and automated content moderation.
- Used RabbitMQ for asynchronous processing and implemented retry, dead-letter, and idempotency patterns for reliable background jobs.
- Used Cloudflare R2 as S3-compatible object storage with presigned uploads for scalable media handling.

In-Memory Knowledge Graph for RAG | *Research Project, 2026*

- Designed an in-memory knowledge graph as a data layer for Retrieval-Augmented Generation applications.
- Implemented graph-based state and relationship tracking for multi-turn conversations and connected data traversal.
- Explored low-latency graph structures for domain-specific chatbots using Small Language Models.

Real-Time Notification System Backbone | *ASP.NET, Redis, Centrifugo, WebSockets*

- Developed an isolated notification infrastructure to move persistent WebSocket connection management away from application servers.
- Integrated Redis for distributed coordination and designed the system to support horizontal scaling across multiple application nodes.

EDUCATION

Informatics Institute of Technology (Affiliated with University of Westminster) | BSc (Hons) in Computer Science | 2023 – Present

Dhammissara National School | G.C.E (Advanced Level) Examination | Physics – B Combined Maths – B Chemistry – C | 2008 – 2021

CERTIFICATIONS

- IBM Machine Learning — Coursera
- Docker Foundations Professional Certificate — LinkedIn Learning
- Diploma in English — Aquinas

REFERENCES

- Thilina Kurukulasuriya, Director, Head of Digital Solutions, Cloud Syntex (Pvt) Ltd, +94772548204, thilina@powerappscore.com
- Sajith Gallage, Lead Full Stack Software Engineer, Accenture Singapore, +6585569927, sajith@cloudsyntex.com